

REMARKS

Claims 26-37 are presently pending in the application.

Claims 1-14 have been cancelled, without prejudice, and claims 26-37 have been added by this amendment. Claims 15-25 have been cancelled as non-elected, without prejudice to the filing of one or more divisional applications.

Claim 26 includes the elements of claims 1 and 5. Claims 27 and 28 depend directly from claim 26 and include the additional elements recited in claim 2 and 3, respectively. Claim 29 includes the elements recited in claims 1 and 3-4. Claim 30 includes the elements recited in claims 6-7 and 10. Claim 31 includes the elements recited in claims 6 and 8-9. Claim 32 includes the elements recited in claims 6 and 11. Claims 33 and 34 depend directly from claim 32 and include the additional elements recited in claims 7 and 8, respectively. Claim 35 includes the elements recited in claims 5 and 12. Claims 36 and 37 depend directly from claim 35 and include the additional elements recited in claims 13 and 14, respectively. As such, no new matter has been added by new claims 26-37. Accordingly, entry of the amendments to the claims is respectfully requested.

Allowable Subject Matter

On page 3, paragraph 4 of Paper No. 10, the Examiner has stated that claims 4 and 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the elements of the base claim and any intervening claims. Applicants thank the Examiner for this statement of allowable subject matter.

Accordingly, claims 4, 9 and 10 have been rewritten in independent form such that the elements of those claims are now included in new claims 29, 31 and 30, respectively.

Claim Rejections – 35 U.S.C. §103(a)

Claims 1-3, 6-8 and 12-14 have been rejected under 35 U.S.C. 103(a) as being unpatentable (obvious) over U.S. Patent No. 6,190,557 of Hisada et al in view of U.S. Patent No. 5,375,276 of Salem. The Examiner argues that Hisada et al teach a system and method of running a spiral wound membrane module comprising a pressure vessel 10 having a raw liquid inlet 13 and one or plurality of spiral envelope separation membranes 1 wound on the outer peripheral surface of a perforated hollow pipe 2, and allowing back wash reverse filtration under low back pressure since the separation membranes are low pressure reverse osmosis membranes which are run at 10 kgf/sq. cm or lower (*i.e.* less than 0.98 MPa), which comprises the step of introducing washing liquid *i.e.* permeate into a permeate outlet 14 connected to a perforated pipe 2 for performing a back wash reverse filtration, axially feeding raw liquid through separation membrane 1, and taking out axially fed raw liquid through raw liquid outlet 15.

The Examiner also contends that claims 1-3, 6-8 and 12-14 essentially differ from the system and method of Hisada et al in reciting the step and gas injection means of injecting gas of not more than 0.3 MPa from at least one opening end of the perforated hollow pipe. However, the Examiner asserts that Salem teaches a system and method of running a spiral wound membrane elements with perforated central core 160 comprising backwashing membrane element by feeding water and air via air conduit 60 thorough a perforated center such that water and air passes radially outwardly through the membrane to dislodge particulates on the

membrane. Thus, the Examiner concludes that it would have been obvious to a person of ordinary skill in the art to modify the system and method of Hisada et al to incorporate air injection system and method of Salem to improve removal of contaminants on membrane which operates at low pressure.

Further, the Examiner has rejected claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisada et al in view of Salem as applied to claims 5 and 6 above, respectively, and further in view of U.S. Patent No. 6,565,747 of Shintani et al. The Examiner argues that Hisada et al teach that a separation membrane formed by bonding the membranes 7 on both sides of a permeate spacer 6, but acknowledges that claims 5 and 11 differ from the method of Hisada et al in view of Salem by reciting that a permeable membrane body is bonded to the surface of a porous sheet material. However, the Examiner contends that Shintani et al teach a spiral wound type separation membrane which is formed by superposing separation membrane 2 on both surfaces of a permeated liquid passage forming member 3 i.e. permeate spacer which is a net of tricot-weaving fibers. Thus, the Examiner concludes that it would have been obvious to one skilled in the art at the time the invention was made to use a conventional permeate spacer of porous net or sheet of Shintani et al to support the membrane of Hisada et al in view of Salem.

Applicants traverse the Examiner's rejections of claims 1-3, 5-8 and 11-14, and the arguments in support thereof, for the reasons that follow.

Referring to the Examiner's rejection of claims 5 and 11, Applicants point out that Shintani et al is only a 35 U.S.C. § 102(e) reference since Shintani et al was filed before the

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present application but issued as patent after the filing date of the present application. Moreover, Shintani et al is owned by the same assignee as the present application (Nitto Denko Corporation), and both inventions were owned by the same Assignee at the time the invention was made. Therefore, Shintani et al cannot be used as a basis for rejection under 35 U.S.C. § 103(a) in view of 35 U.S.C. § 103(c).

Applicants add that the Japanese application priority cases of Shintani et al (JP 11-105848 and JP 11-253457) were not published more than one year before the U.S. filing date of the present application and therefore cannot be references under 35 U.S.C. § 102(b). Specifically, JP 11-105848 was never published and JP 11-253457 was published on December 26, 2000, which is less than one year prior to the July 5, 2001 filing date of the present application.

Accordingly, it is respectfully submitted that claims 5 and 11, and hence new claim 26 (which includes the elements of claims 1 and 5) and new claim 32 (which includes the elements of claims 6 and 11), are patentable over the prior art of record and in condition for allowance. Also, since claims 27-28 and claims 33-34 directly depend from claims 26 and 32, respectively, it is also submitted that claims 27-28 and 33-34 are patentable over the prior art of record and in condition for allowance.

With regard to the Examiner's rejection of claims 12-14, Applicants have added new claim 35 to include the elements of claim 5 with those of claim 12. It is respectfully submitted that new claim 35 is patentable over the prior art of record and in condition for allowance, since Shintani et al, which the Examiner relied upon to reject claim 5, cannot be used as a basis for

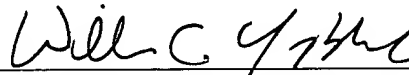
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rejection under 35 U.S.C. §§ 102(b) or 103(a) for the reasons stated above. Also, since claims 36-37 directly depend from claim 35, it is also submitted that claims 36-37 are patentable over the prior art of record and in condition for allowance.

In view of the foregoing Amendment and Remarks, Applicants submit that claims 26-37 are patently distinct from the prior art of record. Accordingly, reconsideration and withdrawal of the Examiner's rejections, and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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